

**AGENCY OF ADMINISTRATION
DEPARTMENT OF STATE BUILDINGS**

MEMORANDUM

TO: Design Consultants

FROM: Teigh R. Southworth, Engineering Consultant

DATE: February 11, 1999

SUBJECT: Design Requirements

Please incorporate all the following that are applicable.

A. Architectural:

- 1 There shall be a minimum of three feet of space between the bottom of the structural steel and the finished ceiling. If the air handlers are grouped, such as in a mechanical room, or on the roof, then the floor closest to the air handlers shall have four feet of space to accommodate main trunk lines.

2 Mechanical:

- a. There should be mechanical office and work area separate from the boiler room. There should be a mop sink available.
- b. The door to the mechanical room should be sized to allow the largest piece of equipment to be replaced, there should be a route from the outside to allow the equipment to be moved.
- c. There should be a half bath close to mechanical office.
- d. Mechanical equipment should be in mechanical rooms not "shoe-horned" into ceiling spaces, or thrown on the roof.
- e. If equipment ends up on the roof then one of the stair towers shall extend through the roof with a vertical door to access the roof. No ladders or roof hatches.

B Mechanical:

- 1 No automatic fill from domestic water on any system treated with glycol. System shall require either a pressure sensor, storage tank, and pump; or manual filling.
- 2 When glycol is required the State's preference is for Propylene Glycol in lieu of Ethylene Glycol.

- 3 All pieces of equipment to be labeled, if this is a renovation then the labeling shall be consistent, and coordinated with, existing pieces of equipment.
- 4 The minimum radius on ductwork elbows shall be 1.5 x width; the maximum width of ductwork shall be 48"; the duct should be as close to square in profile as possible, however the ductwork profile should not exceed 2:1; unless approved by the Department of State Buildings.
- 5 No interior duct lining or insulation.
- 6 Temperature Control Zoning:

The following shall be provided with separate temperature control zones:

- a. Exterior office space (either open office or individual offices): 600 SF per zone maximum.
- b. Interior office space (either open office or individual offices): 1400 SF per zone maximum.
- c. Each corner zone.
- d. Each conference room.
- e. Lobby.
- f. Telecommunications room(s), (these require 24 hr/day conditioning).
- g. Equipment room(s).
- h. Computer room(s).
- i. Waiting room(s).
- j. Break room(s).

In addition, zones shall not cross functional boundaries between different departments.

- 7 The main heat plant should utilize either two boilers @ 67% or three boilers @ 33% capacity, each.
- 8 Avoid the use of direct fired water heaters.

C Electrical:

- 1 No shared neutrals on receptacle or florescent lighting circuits
- 2 Full sized neutrals.
- 3 Color code wires Red/Black/Blue for 120/208V circuits, Orange/Yellow/Brown for 277/460V circuits.
- 4 Identify circuits contained in: pullboxes, junction boxes and connection boxes, by labeling inside of cover with either a phenolic tag or neatly hand written with indelible marker.